

WHAT IS CLAIMED IS:

- 1.) A small antenna comprising:
an antenna conductor; and
a dielectric chip formed at surroundings of said
5 antenna conductor by a plurality of resin moldings.
- 2.) A small antenna comprising:
an antenna conductor; and
a first resin part formed to cover a part of said
antenna conductor; and
10 a second resin part formed to cover a part which
is not covered by said first resin part of said antenna
conductor.
3. The small antenna according to claim 2,
further comprising a projection part formed on said
15 first resin part.
4. The small antenna according to claim 2,
wherein said antenna conductor is a planar type and at
least a part of said first resin part is formed at a
same position of a front surface and a rear surface of
20 said planar type antenna conductor.
5. The small antenna according to claim 1,
wherein said antenna conductor is a meander antenna
conductor.
6. The small antenna according to claim 2,
25 wherein said antenna conductor is a meander antenna
conductor.
- 7.) A small antenna comprising:

a meander antenna conductor;

a first resin part formed on a part of said antenna conductor along a meander width direction; and

5 a second resin part formed to overlap said first resin part and a part on which said first resin part of said antenna conductor are not formed, wherein

said first resin part has a projection part formed to project to a side of said second resin part.

10 8. The small antenna according to claim 7, wherein said projection part has a same height as said second resin part, and is formed to be arranged at least three corners of said second resin part.

(9.) A small antenna comprising:

a meander antenna conductor;

15 a first resin part formed at both ends along a meander width direction of said antenna conductor; and

a second resin part formed in an intermediate part along the meander width direction of said antenna conductor.

20 (10.) A small antenna comprising:

a meander antenna conductor;

a first resin part formed at both ends along a meander width direction of said antenna conductor;

25 a plurality of projection parts formed on both surfaces of said first resin part; and

a second resin part formed on both surfaces including said first resin part of said antenna

conductor to become a same surface as said projection part.

✓ 5 11. The small antenna according to claim 7,
wherein said projection part is formed at four corners
of said first resin part (or) a neighborhood thereof.

✓ 12. The small antenna according to claim 10,
wherein said projection part is formed at four corners
of said first resin part (or) a neighborhood thereof.

10 13. The small antenna according to claim 2,
wherein a material whose liquidity is higher than a
resin to form said second resin part at a molding is
used as a resin to form said first resin part.

15 14. The small antenna according to claim 7,
wherein a material whose liquidity is higher than a
resin to form said second resin part at a molding is
used as a resin to form said first resin part.

20 15. The small antenna according to claim 9,
wherein a material whose liquidity is higher than a
resin to form said second resin part at a molding is
used as a resin to form said first resin part.

16. The small antenna according to claim 10,
wherein a material whose liquidity is higher than a
resin to form said second resin part at a molding is
used as a resin to form said first resin part.

25 (17) A small antenna comprising:

an antenna conductor;

a first resin part which includes a low dielectric

material formed on a side of said antenna conductor;
and

5 a second resin part which includes a high
dielectric material formed to cover said antenna
conductor and said first resin part.

18. A small antenna comprising:

a meander antenna conductor;

10 a first resin part which is formed between each
conductor of said antenna conductor and includes a low
dielectric material; and

15 a second resin part which includes a high
dielectric material and is provided on upper and lower
surfaces of said antenna conductor and the first resin
part.

19. The small antenna according to claim 17,
wherein said first resin part is formed with a low
permittivity bonding material, and said second resin
part is bonded to said antenna conductor with said
bonding material.

20 20. The small antenna according to claim 18,
wherein said first resin part is formed with a low
permittivity bonding material, and said second resin
part is bonded to said antenna conductor with said
bonding material.

25 21. A small antenna comprising:

a meander antenna conductor;

a first resin part which includes a low dielectric

material and is provided between each conductor of said antenna conductor;

an integral part provided to project to an upper surface and a lower surface of said first resin part along a pitch direction of said antenna conductor; and
5 a second resin part which includes a high dielectric material and is provided to cover said antenna conductor and said first resin part.

22. The small antenna according to claim 21,
10 wherein said second resin part is formed to cover said integral molding part in addition to said antenna conductor and said first resin part.

(23.) A manufacturing method of a small antenna comprising:

15 putting a part of a antenna conductor between die faces of a first mold;

molding a first resin part on said antenna conductor;

20 putting the first resin part of said antenna conductor between die faces of a second mold;

molding a second resin part on said antenna conductor.

(24.) A manufacturing method of the small antenna comprising:

25 putting a antenna conductor between die faces of a first mold;

molding a first resin part on said antenna

conductor;

forming a pressure projection part on said first resin part;

5 putting said pressure projection part formed on the first resin part of said antenna conductor between die faces of a second mold; and

molding a second resin part on said antenna conductor.

10 25. The manufacturing method of a small antenna according to claim 23, wherein a material whose liquidity is higher than a material to form said second resin part at a molding is used as a material to form said first resin part.

15 26. The manufacturing method of a small antenna according to claim 24, wherein a material whose liquidity is higher than a material to form said second resin part at a molding is used as a material to form said first resin part.

20 27. The manufacturing method of a small antenna according to claim 23, wherein a material whose dielectric is lower than a material to form said second resin part at a molding is used as a material to form said first resin part.

25 28. The manufacturing method of a small antenna according to claim 24, wherein a material whose dielectric is lower than a material to form said second resin part at a molding is used as a material to form

said first resin part.

29. The manufacturing method of small antenna according to claim 23, wherein at least one of the first mold and the second mold putting said antenna
5 conductor or said first resin part comprises a material applying a pressure which is applied to at least one of said die faces by an elastic material and is carried out to said antenna conductor or said first resin part.

30. The manufacturing method of small antenna
10 according to claim 24, wherein at least one of the first mold and the second mold putting said antenna conductor or said first resin part comprises a material applying a pressure which is applied to at least one of said die faces by an elastic material and is carried
15 out to said antenna conductor or said first resin part.